What is claimed is:

1. A mask blank for use in EUV lithography comprising a substrate with a front side and a rear side whereby a coating for use as a mask in EUV lithography is applied to the front side, wherein the rear side comprises an electrically conductive coating.

2. The mask blank according to claim 1, wherein the substrate comprises a material with an extremely low coefficient of thermal expansion.

3. The mask blank according to claim 1, wherein, with a layer thickness of approximately 100 nm, the resistivity of the electrically conductive coating is at least approximately 10^{-7} Ω cm, more preferably at least approximately 10^{-6} Ω cm and even more preferably at least approximately 10^{-5} Ω cm.

4. The mask blank according to claim 1, wherein the resistance of the electrically conductive coating to abrasion with a cloth according to DIN 58196-5 (German Industry Standard) falls into at least category two.

5. The mask blank according to claim 1, wherein the resistance of the electrically conductive coating to abrasion with an eraser according to DIN 58196-4 (German Industry Standard) falls into at least category two.

6. The mask blank according to claim 1, wherein the adhesive strength of the electrically conductive coating determined in an adhesive tape test according to DIN 58196-6 (German Industry Standard) corresponds to a detachment of substantially 0%.

7. The mask blank according to claim 1, wherein the substrate comprises silica glass or ceramic glass.

8. The mask blank according to claim 1, wherein at least on the front side a coating is applied which comprises a system of dielectric double layers, in particular Mo/Si double layers, and one chromium layer or one EUV-absorbing layer.

9. The mask blank according to claim 8, wherein the dielectric double layers are applied by ion-beam-assisted deposition, in particular ion-beam-assisted sputtering.

10. The mask blank according to claim 1, wherein the front side and the rear side have a substantially identical coating.

11. A method for coating a mask blank for use in EUV lithography comprising a substrate with a front side and a rear side, in which method a coating for use as a mask in EUV lithography is applied to the front side and an electrically conductive coating is applied to the rear side.

12. The method according to claim 11 wherein the substrate is provided as a substrate comprising a material with an extremely low coefficient of thermal expansion.

13. The method according to claim 11, wherein the electrically conductive coating is applied in such a way that, with a layer thickness of approximately 100 nm, the resistivity of the electrically conductive coating is at least approximately 10^{-7} Ω cm, more preferably at least approximately 10^{-6} Ω cm and even more preferably at least approximately 10^{-5} Ω cm.

14. The method according to claim 11, whereby the conductive coating is applied in such a way that the resistance of the electrically conductive coating to abrasion with a cloth according to DIN 58196-5 (German Industry Standard) falls into at least category two.

15. The method according to claim 11, whereby the conductive coating is applied in such a way that the resistance of the electrically conductive coating to abrasion with an eraser according to DIN 58196-4 (German Industry Standard) falls into at least category two.

16. The method according to 11, whereby the conductive coating is applied in such a way that the adhesive strength of the electrically conductive coating determined in an adhesive tape test according to DIN 58196-6 (German Industry Standard) corresponds to a detachment of substantially 0%.

17. The method according to claim 11, in which at least on the front side a coating is applied which comprises a system of dielectric double layers, in particular Mo/Si double layers, and one chromium layer or one EUV-absorbing layer.

18. The method according to claim 17, whereby the dielectric double layers are applied by ion-beam-assisted deposition, in particular ion-beam-assisted sputtering.

19. The method according to claim 11, in which the front side and the rear side have a substantially identical coating.